The TrimBot2020 project researches the robotics and vision technologies to prototype the first outdoor garden trimming robot. The robot will navigate over varying terrain, approach rose bushes, hedges and boxwood topiary, to trim them to an ideal shape. The robot will be based on a modified Bosch Indego robot lawnmower, which will navigate using a user-defined garden map and 3D scene analysis, and then visually servo a novel electric plant cutter.

In the TrimBot2020 project, the University of Freiburg provides state-of-the-art computer vision algorithms for scene understanding and control. With expertise in real time optical flow, depth perception and neural networks, Freiburg contributes monocular and stereo vision and data for 3D modeling of the trimming task as well as for online visual robot control.

www.trimbot2020.org